

4a. *Ischnura kellicotti* Williamson.

1900, July 2, one ♂, three orange ♀♀ on margin of Round Pond. Identified by Philip P. Calvert, Ph. D., who informs me that this species has not before this been found in Maine; although he has taken it on Block Island, off the Rhode Island coast. On the day I found this species I saw many other orange ♀♀ on the lily pads and nearly all out of reach. The one ♂ was with an orange ♀ when taken. The place, Round Pond, was an ideal one for dragonflies.

On June 20, 1901, I saw a *Cordulegaster maculatus* ovipositing by forcibly striking the water with the tip of her abdomen. I did not find one of the eggs, and the ♀ escaped after being in the net.

A List of Insects Taken in the Adirondack Mountains, New York.—I.

BY ALEX. MACGILLIVRAY AND C. O. HOUGHTON.

As is well known to most of the systematic entomologists of the country but little collecting has been done in the Adirondack Mountains, although the White Mountains of New Hampshire, an adjoining State, have received a good deal of attention from various well-known collectors. As long ago as 1878 Dr. Lintner* remarked upon this fact, and after referring to some of the work done in the White Mountains says: "Meanwhile, the extensive Adirondack region with its numerous lofty mountain peaks, its deep gorges, its hundreds of lakes—perhaps second only to the White Mountains in point of interest to the entomologist of any locality in the United States east of the Rocky Mountains—has been permitted each year to bury within itself its entire entomological wealth. Previous to the collection noticed in this paper, scarce an insect had been drawn from it. At the present, nothing has been reported of its mountain insect fauna. Many new species are doubtless to be discovered there, and the first comparison of its fauna with that of other elevated and more northern regions is yet to be made. It is not impos-

* List of Lepidoptera collected in the Adirondack region of New York. Entomological Contributions, No. iv, 1878. pp. 141-154.

sible (although our Eastern friends will not admit the possibility) that the naked summit of Mt. Marcy may yield to earnest search another locality for that very interesting butterfly of so restricted range, *Chionobas semidea*, while aspirations less lofty would in all probability be rewarded by the addition of *Argynnis montinus* to our State fauna.

"It is sincerely to be hoped that, from the growing interest manifested in entomology, the numerous accessions to the number of its students, the facility afforded by recent publications and in several extensive classified collections—the reproach resting on the entomologists of New York may be speedily removed. And while the thorough exploration of any locality can scarcely fail of bringing to light much new material, the ambitious student may have for his incentive the assurance that in the Adirondack region, and especially among the Adirondack Mountains proper, there is open to him an unexplored field where faithful search will assuredly yield him a most abundant return."

Although nearly a quarter of a century has elapsed since the above was written, practically nothing seems to have been done whereby our knowledge of the insect fauna of this interesting and extensive field has been increased; in fact, the list of Lepidoptera above referred to is the only published list of the insects of this region that we are acquainted with; and this is apology for offering this very incomplete list of insects that were taken during a ten days' outing in June, 1901. Our collecting was done in the vicinity of Axton, N. Y., and chiefly between June 16th and 23d, although a few insects were taken previous to this by one of the party who arrived on June 12th.

Axton is the field headquarters of the College of Forestry of Cornell University, and is situated, approximately, in the center of the 30,000 acre tract that has here been set apart for experimental forestry. The place, which is a mere hamlet, consisting of little save a hotel and the few buildings belonging to the College of Forestry, is located near the northern border of Township 26, Franklin County. The elevation is about 1600 feet.

The Racquette river, which is joined a short distance to the southeast by Stony creek, flows past the place, but the nearest

body of water of importance is Saranac lake about two miles to the north.

The land in the vicinity has been lumbered over, and no virgin forest of importance is to be found nearer than Stony Mountain about one and a half miles to the west.

A considerable tract about the buildings has been wholly cleared up and the land is tilled; this is considerably higher than the surrounding land, a part of which is a sphagnum swamp.

Our collecting was done principally along the roads through the woods and fields, beside the water-courses and the more open sections covered chiefly by bushes, weeds and small trees. Practically no collecting was done in the thick woods, save along the roads and pathways. The trees most abundant are the maple, birch and beech of the hard woods; a few pine, poplar, cherry, ash, etc., are also to be found.

No night collecting was undertaken, which accounts, in part, for the very small number of moths listed. Some sweeping was done, and a large proportion of the smaller insects taken, especially Hymenoptera and Coleoptera, was secured in this way.

COLEOPTERA.*

CICINDELIDÆ.	<i>Pterostichus lucublandus Say.</i>
<i>Cicindela longilabris Say.</i>	“ <i>caudicalis Say.</i>
“ <i>purpurea Oliv.</i>	“ <i>luctuosus Dej.</i>
“ <i>vulgaris Say.</i>	“ <i>mutus Say.</i>
“ <i>repanda Dej.</i>	“ <i>erythropus Dej.</i>
	<i>Amara avida Say.</i>
CARABIDÆ.	“ <i>apricarius Payk.</i>
<i>Cychrus viduus Dej.</i>	“ <i>angustata Say. †</i>
<i>Calosoma calidum Fab.</i>	“ <i>impuncticollis Say.</i>
<i>Bembidium variegatum Say.</i>	“ <i>chalcea Dej.</i>
“ <i>quadrinaculatum Linn.</i>	<i>Calathus impunctatus Say.</i>
“ <i>graciliforme Hayw.</i>	<i>Platynus placidus Say.</i>
<i>Tachys nanus Gyll.</i>	<i>Platynus sp.</i>

* We are indebted to Mr. Charles Liebeck for the determination of most of the species embraced in this list; the remainder were determined by C. O. Houghton.

† This species was taken in considerable numbers by sweeping; we commonly find it on grass stalks, often near the top, on low ground.

Lebia tricolor Say.
 " *frigida* Chd.
Chlænienus sericeus Forst.
 " *pennsylvanicus* Say.
 " *tomentosus* Say.
Agonoderus pallipes Fab.
Harpalus viridiæneus Beauv.
 " *pleuriticus* Kirby.
 " *herbivagus* Say.
 " *laticeps* Lec.
Stenolophus conjunctus Say.
 " *ochropezus* Say.
Bradycellus rupestris Say.
Anisodactylus rusticus Say.
 " *interpunctatus* Kirby.
 " *baltimorensis* Say.

GYRINIDÆ.

Gyrinus borealis Aubé.
Dineutes hornii Robts.

HYDROPHILIDÆ.

Cymbiodyta lacustris Lec.
Sphæridium scarabæoides Linn.
Cercyon hæmorrhoidalis? Fab.

SILPHIDÆ.

Silpha lapponica Hbst.
Choleva terminans Lec.
Anisotoma assimilis Lec.
Liodes discolor Melsh.
Agathidium exiguum Melsh.

PSELAPHIDÆ.

Two specimens not determined.

STAPHYLINIDÆ.

Homalota sp.
Listrotrophus cingulatus Grav.
Philonthus æneus Rossi.
Xantholinus cephalus Say.
Lathrobium confluens?
 " *collare* Er.
Pæderus littorarius Grav.
Tachyporus jocosus Say.
 " *chrysomelinus* Linn.

Erchomus ventriculus Say.
Boletobius cincticollis Say.
Anthobium convexum Fauv.
 Two undetermined Aleocharids.

PHALACRIDÆ.

Phalacrus politus Melsh.
 " *pumilio* Lec.
Olibrus ergoti.

CORYLAPHYDÆ.

Orthoperus scutellaris? Lec.

COCCINELLIDÆ.

Hippodamia parenthesis Say.
Coccinella trifasciata Linn.
Adalia frigida Schn.
Harmonia picta Rand.
Hyperaspis bigeminata Rand.
Scymnus tenebrosus Muls.

CUCUJIDÆ.

Læmophlæus convexulus Lec.

CRYPTOPHAGIDÆ.

Cryptophagus sp.
Atomaria ochracea Zimm.
 " *ephippiata* Zimm.

DERMESTIDÆ.

Byturus unicolor Say.
Dermestes lardarius Linn.

HISTERIDÆ.

Hister planipes Lec.
 " *lecontei* Mars.
Saprinus distinguendus Mars.

NITIDULIDÆ.

Epuræa avara Rand.
 " *labilis* Er.
Nitidula bipustulata Linn.
 " *rufipes* Linn.
Omosita colon Linn.
Ips fasciatus Oliv.
 " " var. *Oliv.*

LATRIDIID.E.

Corticaria distinguenda.

BYRRHID.E.

Cytilus sericeus *Forst.*" trivittatus *Melsh.*

DASCYLLID.E.

Cyphon obscurus *Guér.*

ELATERID.E.

Adelocera brevicornis *Lec.*Cardiophorus gagates *Er.*Cryptohypnus abbreviatus *Say.*Elater pedalis *Germ.*" mixtus *Hbst.*" pullus *Germ.*" socer *Lec.*" nigricans *Germ.*" rubricus *Say.*Agriotus stabilis *Lec.*" fucosus *Lec.*" limosus *Lec.*Dolopius lateralis *Esch.*Limoniid pectoralis *Lec.*Campylus denticornis *Kirby.*Athous rufifrons *Rand.*Corymbites spinosus *Lec.*" appressus *Rand.**

" nov. sp.

THROSCID.E.

Throscus constrictor *Say.*" chevrolati *Bonv.*

BUPRESTID.E.

Calcophora fortis *Lec.*Dicerca divaricata *Say.*" tenebrosa *Kirby.*Agrilus anxius *Gory.*" egenus *Gory.*

LAMPYRID.E.

Celetes basalis *Lec.*Cænna dimidiata *Fab.*Pyropyga fenestralis *Melsh.*Pyractomena borealis *Rand.*Podabrus diadema *Fab.*" modestus *Say.*Telephorus fraxini *Say.*" carolinus *Fab.*" rotundicollis *Say.*" bilineatus *Say.*

" sp.

Malthodes sp.

MALACHID.E.

Collops vittatus *Say.*Attalus nigrellus *Lec.*Thanasimus dubius *Fab.*Hydnocera difficilis *Lec.*Necrobia violaceus *Linn.*

PTINID.E.

Ptinus brunneus *Dufst.*Dinoderus porcatus *Lec.*

LUCANID.E.

Platycerus depressus *Lec.*

SCARAB.EID.E.

Onthophagus hecate *Panz.*Aphodius fossor *Linn.*" ruricola *Melsh.*" prodromus *Brahm.*Dichelonycha elongata *Fab.†*Lachnosterna dubia *Smith.*Trichius affinis *Gory.*

* In a note appended to the list of names returned Mr. Liebeck says: "*Corymbites appressus* was described from Lake Superior, and I have seen a number from Duluth, Minn., and these are the only specimens I know of; it is considered quite rare."

† This species was very abundant on hazel nut bushes (*Corylus*). Many pairs were taken together.

CERAMYCIDÆ.

Aseum mœstum Hald.
Tetropium cinnamopterum Kirby.
Phymatodes dimidiatus Kirby.
Callidium antennatum Newm.
Pachyta monticola Rand.
Acmaeops pratensis Laich.
Leptura capitata Newm.
 " *chrysocoma* Kirby.*
 " *mutabilis* Newm.
Monohammus scutellatus Say.
 " *oregonensis* Lec.

CHRYSOMELIDÆ.

Donacia pusilla Say.
Orsodacna childreni Kirby.
 " " var. *hepatica* Say.
 " " " *trivittata* Lec.
 " " " *tibialis* Kirby.
Pachybrachys infaustus? Hald.
Adoxus vitis Linn.
Typophorus canellus var. *quadri-*
guttata Lec.
Typophorus canellus var. *quadri-*
notata Say.
Typophorus canellus var. *gilvipes*
Horn.
Graphops pubescens Melsh.
Doryphora 10-lineata Say.
Chrysomela philadelphica Linn.†
 " *bigsbyana* Kirby.

Lina tremulæ Fab.‡
Gonioctena pallida Linn.
Diabrotica 12-punctata Oliv.
Galerucella decora Say.
 " *cavicollis* Lec.
Edionychis quercata Fab.
 " *subvittata* Horn.
Disonycha limbicollis Lec.
 " *quinquevittata* Say.
 " *pennsylvanica* Ill.
Haltica ignita Ill.
 " *evicta* Lec.
Crepidodera helxines Linn.
Epitrix cucumeris Harr.
Microrhopala excavata Oliv.

TENEBRIONIDÆ.

Phellopsis obcordata Kirby.
Upis ceramboides Linn.
Boletotherus bifurcus Fab.

CISTELIDÆ.

Isomira quadristriata Coup.

LAGRIIDÆ.

Arthromacra ænea Say.¼

MELANDRYIDÆ.

Melandrya striata Say.
Xylita laevigata Hellw.

CEDEMERIDÆ.

Asclera puncticollis Say.

* Mr. Liebeck says of this species: "*Leptura chrysocoma* is a common species in the western States, but yours is the first I have seen from the East."

† In a collection of beetles recently purchased by Cornell University of Mr. R. J. Crew there is a single specimen of this species labeled Toronto, Ont.

‡ A good series of this species was taken, all of them on dogwood bushes (*Cornus*) chiefly along water courses; several pairs were secured.

§ This was one of the most common Chrysomelids seen about Axton, and a large series was secured: they were found almost wholly upon poplar, *Populus tremuloides*, doubtless.

½ This species was found in large numbers on *Corylus* associated with *Dichelonycha elongata*: scores of specimens were seen.

CEPHALOIDÆ.

Cephalone leptrides *Newm.*

MORDELLIDÆ.

Anaspis flavipennis *Hald.**Mordella scutellaris* *Fab.**Mordellistena comata* var. *cervicalis**Lec.**Mordellistena aspersa* *Melsh.*" *pustulata* *Melsh.*

ANTHICIDÆ.

Corphyra lugubris *Say.**Notoxus anchora* *Hentz.*

PYROCHROIDÆ.

Schizotus cervicalis *Newm.**Dendroides bicolor* *Newm.*" *concolor* *Newm.**

MELOIDÆ.

Melœ angusticollis *Say.*

OTIORHYNCHIDÆ.

Hormorus undulatus *Uhler.*

CURCULIONIDÆ.

Apion walshii *Smith.**Phytonomus nigrirostris* *Fab.**Macrops sparsus* *Say.*" *humilis* *Gyll.**Hylobius confusus* *Kirby.**Anthonomus signatus* *Say.*" *corvulus* *Lec.**Piazorhinus scutellaris* *Say.**Gymnetron teter* *Fab.**Tyloderma æreum* *Say.**Cœliodes nebulosis* *Lec.**Ceutorhynchus decipiens* *Lec.**Rhinoncus pyrropus* *Lec.**Promecatarsus* ? sp.

SCOLYTIDÆ.

Pityophthorus materiarius *Fitch.*" *sparsus* *Lec.**Xyleborus cœlatus* *Eich.**Polygraphus rufipennis* *Kirby.*

ANTHRIBIDÆ.

Cratoparis lunatus *Fab.*

* Thirty-five males of this species were taken as they were flying about over a patch of raspberry bushes, at the edge of the woods, just at dusk : only one female was secured.

Larva vice Nymph.

BY O. W. OESTLUND.

There are three distinct periods or stages in the life-history of an insect, the egg, the larva and the imago. In the first embryonic development takes place ; the second is the period of growth, while the third may be said to be the period of reproduction and distribution of species. In primitive insects, before wings had yet been acquired as organs of locomotion, there probably was but slight difference, if any, between the larva and the imago. But with the development of wings as organs of locomotion in the adult, the separation of the imago as a distinct stage was gradually brought about. At first this difference may have been comparatively slight, as them ode of